



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/774,404

02/10/2004

Jin-gyo Seo

1293.1076-DC

9836

49455

7590

05/09/2006

STEIN, MCEWEN & BUI, LLP
1400 EYE STREET, NW
SUITE 300
WASHINGTON, DC 20005

EXAMINER

BATTAGLIA, MICHAEL V

ART UNIT

PAPER NUMBER

2627

DATE MAILED: 05/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/774,404		SEO ET AL.	
	Examiner		Art Unit	
	Michael V. Battaglia		2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 17, 2006 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Fitzpatrick et al (hereafter Fitzpatrick) (US 5,757,735).

In regard to claim 1, Fitzpatrick discloses an adaptive writing method of writing input data on an optical recording medium (Fig. 6, element 670 and see Response to Arguments below) using a write pulse waveform (“laser control codes” of Col. 5, lines 55 and Col. 7, lines 28) including a first pulse, a last pulse and a multi-pulse train (Tables 1 and 2 of Cols. 8-9, particularly the laser control codes for 6T-8T mark lengths, and note that each consecutive series of 1’s is a pulse (Col. 5, lines 60-65)), comprising: controlling the write pulse waveform based on a grouping table (Fig. 3, elements 340a and 340b) to generate an adaptive write pulse waveform (Fig. 6, “Pulses” and Col. 9, lines 26-29 and 53-56), the grouping table storing width data of the first and/or last pulses of the write pulse waveform (number of consecutive 1’s for the

first and last pulses of the write pulse waveform determines width of first and last pulses) varying according to corresponding stored values of lengths of marks to be written (the width data in Tables 1 and 2 of Cols. 8-9 of the first and/or last pulses of the write pulse waveform vary as the length of the mark to be written progresses from 2T to 8T); and optically writing the input data on the optical recording medium using the adaptive write pulse waveform (Fig. 6 and Col. 5, lines 53-58 and see Response to Arguments below), wherein the generated adaptive write pulse waveform is generated without regard for a trailing space of a present mark being written using the adaptive write pulse waveform (Col. 9, lines 24-56). It is noted that Fig. 4 shows the widths of the first and last pulses of the write pulse waveform varied to adapt to the presence or lack of residual heat (Col. 8, lines 20-26 and Col. 11, lines 13-21) and the write pulse waveform output by element 620 of Fig. 6 is therefore an adaptive write pulse waveform.

In regard to claim 3, Fitzpatrick discloses an adaptive writing method of writing input data on an optical recording medium (Fig. 6, element 670 and see Response to Arguments below) using a write pulse waveform ("laser control codes" of Col. 5, lines 55 and Col. 7, lines 28) including a first pulse, a last pulse and a multi-pulse train (Tables 1 and 2 of Cols. 8-9, particularly the laser control codes for 6T-8T mark lengths, and note that each consecutive series of 1's is a pulse (Col. 5, lines 60-65)), comprising: controlling the write pulse waveform based on a grouping table (Fig. 3, elements 340a and 340b) having width data grouped in pulse groups (each "laser control code" of Tables 1 and 2 of Cols. 8-9 is a pulse group) which group the first and/or last pulses of the write pulse waveform by corresponding lengths of a present mark (lengths 2T-8T of Tables 1 and 2 of Cols. 8-9) of input data and a leading space ("last written space" of Col. 9, lines 38-51) of the present mark to generate an adaptive write pulse waveform (Fig. 6, "Pulses" and Col. 9, lines 26-29

and 53-56); and optically writing the input data on the optical recording medium using the adaptive write pulse waveform (Fig. 6 and Col. 5, lines 53-58 and see Response to Arguments below). It is noted that Fig. 4 shows the widths of the first and last pulses of the write pulse waveform varied to adapt to the presence or lack of residual heat (Col. 8, lines 20-26 and Col. 11, lines 13-21) and the write pulse waveform output by element 620 of Fig. 6 is therefore an adaptive write pulse waveform.

In regard to claim 4, Fitzpatrick discloses an adaptive writing method of writing input data on an optical recording medium (Fig. 6, element 670 and see Response to Arguments below) using a write pulse waveform ("laser control codes" of Col. 5, lines 55 and Col. 7, lines 28) including a first pulse, a last pulse and a multi-pulse train (Tables 1 and 2 of Cols. 8-9, particularly the laser control codes for 6T-8T mark lengths, and note that each consecutive series of 1's is a pulse (Col. 5, lines 60-65)), comprising: controlling the write pulse waveform based on a grouping table (Fig. 3, elements 340a and 340b) to generate an adaptive write pulse waveform (Fig. 6, "Pulses" and Col. 9, lines 26-29 and 53-56), the grouping table storing width data of the first and/or last pulses of the write pulse waveform (number of consecutive 1's for the first and last pulses of the write pulse waveform determines width of first and last pulses) grouped in corresponding pulse groups (each "laser control code" of Tables 1 and 2 of Cols. 8-9 is a pulse group) according to lengths of marks to be written (lengths 2T-8T of Tables 1 and 2 of Cols. 8-9) and/or lengths of spaces ("last written space" of Col. 9, lines 38-51) adjacent to the marks to be written; and optically writing the input data on the optical recording medium using the adaptive write pulse waveform (Fig. 6 and Col. 5, lines 53-58 and see Response to Arguments below). It is noted that Fig. 4 shows the widths of the first and last pulses of the

write pulse waveform varied to adapt to the presence or lack of residual heat (Col. 8, lines 20-26 and Col. 11, lines 13-21) and the write pulse waveform output by element 620 of Fig. 6 is therefore an adaptive write pulse waveform.

Claims 2 and 5-18 are rejected on the same grounds as in the final rejection mailed October 19, 2005.

Response to Arguments

3. Applicant's arguments filed January 17, 2006 with respect to claims 1-18 have been fully considered but they are not persuasive. Applicant argues that the claimed "optically writing the input data on the optical recording medium" does not read on Fitzpatrick's magneto-optically writing the input data on the magneto-optical (MO) medium. However, the claim limitations do not patentably distinguish the claimed invention from the prior art of Fitzpatrick because an MO recording medium is a type of "optical recording medium" and MO writing is a type of "optical[] writing." MO is to optical as a square is to a rectangle (see Maeda et al (US 5,633,844) (Col. 1, lines 48-58), Tominaga et al (US 5,569,517) (Col. 1, lines 9-14), and Hajjar et al (US 5,696,752) (Col. 4, lines 48-52)).

While it is true that the laser source of Fitzpatrick (Fig. 6, element 640) performs writing by supplying a pulsed laser beam, which has been modulated in accordance with the input data, to the recording medium in conjunction with an appropriate magnetic field supplied by the permanent magnet (Fig. 6, element 680) (Col. 5, lines 51-64 and Col. 6, lines 11-20), the writing of Fitzpatrick is optical writing simply because the laser source of Fitzpatrick performs writing by supplying a pulsed laser beam, which has been modulated in accordance with the input data, to the recording medium (Fig. 6 and Col. 5, lines 51-64).


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael V. Battaglia whose telephone number is (571) 272-7568. The examiner can normally be reached on M-F, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Michael Battaglia


THANG V. TRAN
PRIMARY EXAMINER